

FEASIBILITY STUDY

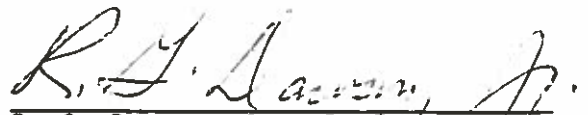
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Graham, Maple Street Extension  
to NC 87 at Moore Street  
Alamance County  
U-2411

Prepared by  
Planning and Research Branch  
Division of Highways  
N. C. Department of Transportation

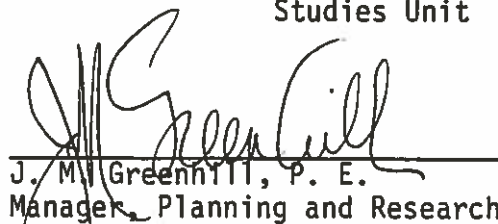


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I. DESCRIPTION

This report covers a preliminary study of an extension of Maple Street in Graham. This project is included in the 1988-1996 Transportation Improvement Program for feasibility study and/or right of way protection. It is not currently funded.

II. PURPOSE OF PROJECT

In the studied area of Graham, all traffic flowing in a north-south direction must utilize NC 87 to cross I-85, which serves the area in an east-west direction. The proposed extension of Maple Street, when combined with U-2305 (a bridge project carrying Maple Street over I-85), will alleviate congested conditions by providing an additional north-south connector crossing I-85.

The northern section of the proposed extension of Maple Street generally parallels NC 87 about 2000 feet to the west, with the southern segment joining NC 87 at Moore Street. NC 87 has a current traffic volume of 20,000 vehicles per day. The I-85/NC 87 interchange is heavily congested, especially during peak hours. The primary problem occurs at the signalized ramp terminals.

The purpose of the project is to reconnect segments of Maple Street that were severed by construction of I-85 in the 1960's, and provide improved traffic flow between areas north of I-85 and areas south of I-85. The growth of Graham has resulted in additional suburban areas to the south of I-85. The corresponding increase in traffic volumes along NC 87 has created the need for a second north-south thoroughfare.

The proposed project will also improve access for emergency vehicles. This is especially true for the Alamance County Rescue Service, which is located on Maple Street just north of I-85.

The traffic volume for the proposed facility, mainly on new location, is initially estimated at 3000 vehicles per day (vpd) throughout. This volume is expected to increase to 5,000 vpd on Section A, and 20,000 vpd on Section B by the end of the planning period (year 2010).

III. THOROUGHFARE PLAN, RELATED IMPROVEMENTS

The Alamance County Urban Area Thoroughfare Plan has recently been modified to extend Maple Street as a minor thoroughfare along the alignment labeled Section A on Figure 2 attached. The southern segment labeled Section B on Figure 2 functions as a part of the proposed Inner

Loop and is designated as a major thoroughfare. The northern end of Section A (on Figure 2) joins to the scheduled, funded TIP project U-2305 which is a bridge extension of Maple Street (north) over I-85 to SR 2389 and Maple Street south of the Interstate route. This project has strong local support.

#### IV. RECOMMENDATIONS AND COSTS

##### Location

Based on consideration of overall existing development in the area and relationship to the ultimate thoroughfare system, the recommended location for the Maple Street Extension is shown on Figure 1. For the most part, the alignment is on new location, positioned to minimize detrimental impacts on existing development. Between SR 2309 and NC 87, the proposed project utilizes the existing alignment of Moore Street.

##### Design

Based on the above projected traffic volumes, a 2-lane shoulder section with 12-foot lanes and 2-foot paved shoulders is recommended for the entire length of the project. A two-lane section on an estimated 60-foot right-of-way should be sufficient for Section A throughout the planning period. However, it is recommended that a 100-foot right-of-way be obtained for an ultimate 5-lane curb and gutter section on Section B to allow for future widening when Section B functions as part of the proposed Inner Loop for Graham. The total route is 1.7 miles in length.

##### Costs

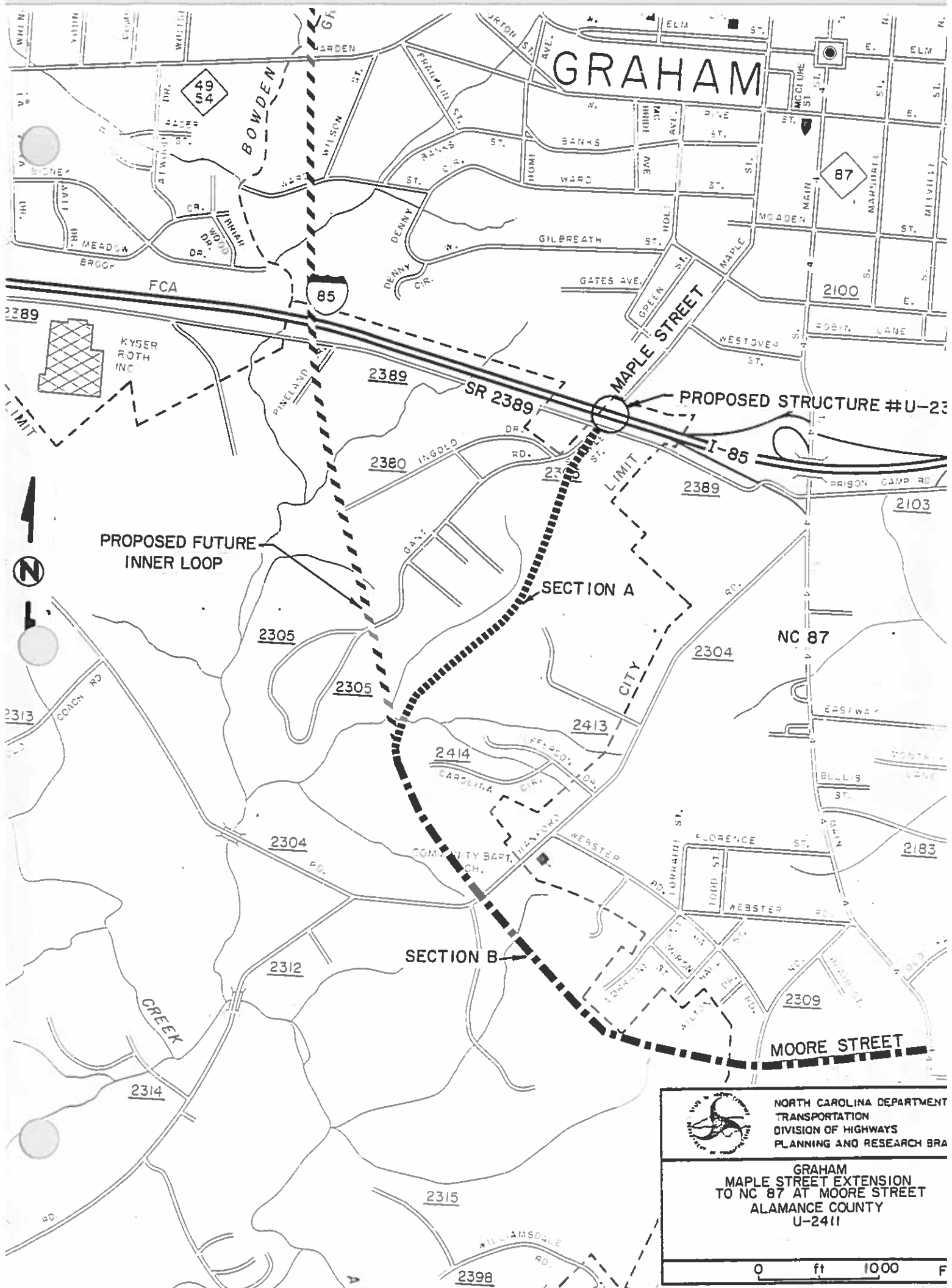
The total estimated cost for the Maple Street extension is \$3,200,000, including \$2,000,000 for construction and \$1,200,000 for right-of-way. The above cost estimates were prepared by the Preliminary Cost Estimate Engineer and the Right-of-Way Branch.


#### V. OTHER COMMENTS

Possible negative impacts of the project are: (1) a small loss of wildlife habitat; (2) loss of forested land; and (3) relocation of 6 residences.

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning and environmental document prior to that time, and a final decision made as to the most appropriate improvement.

MH/sdt

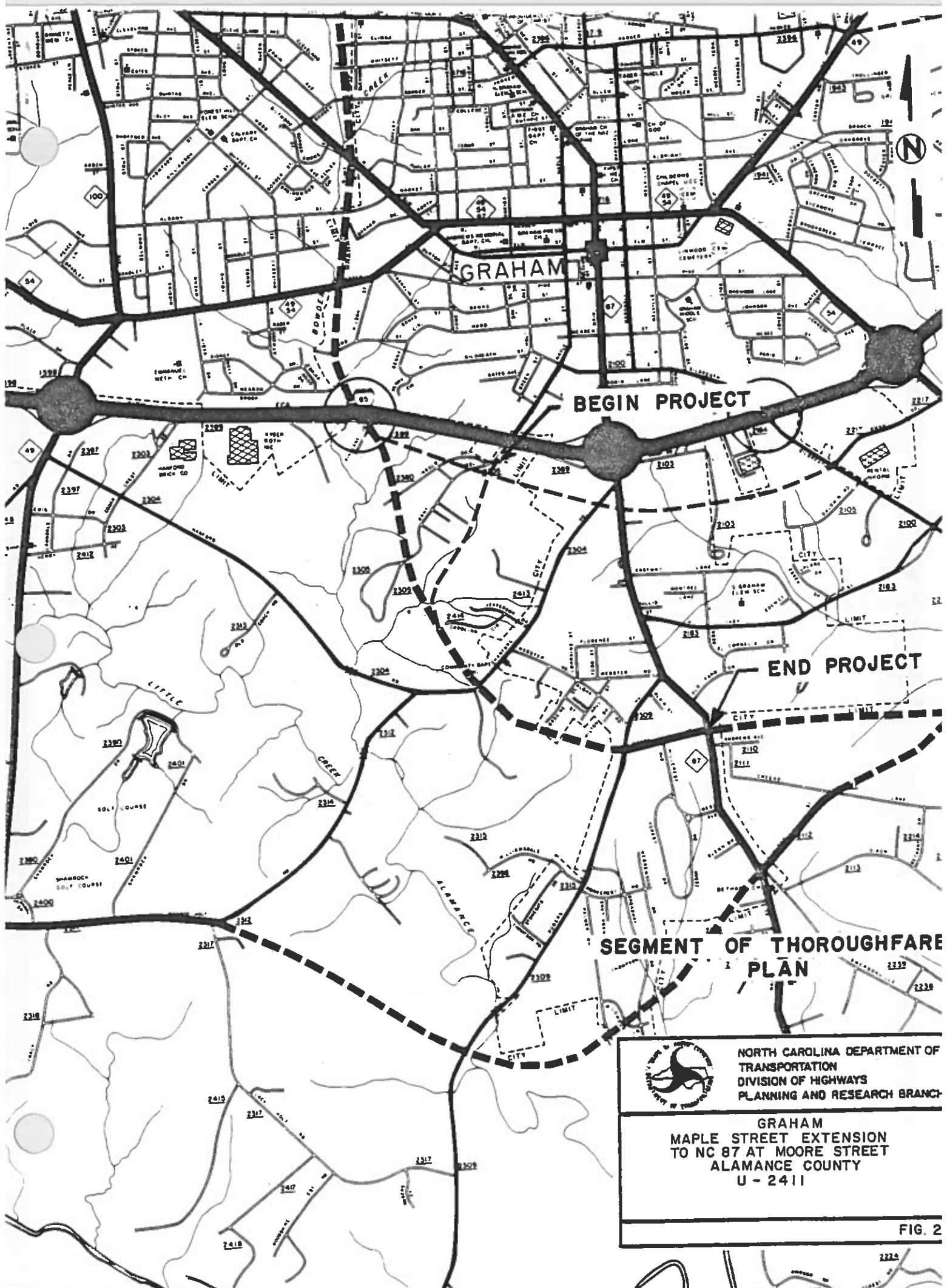





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FIG. 2